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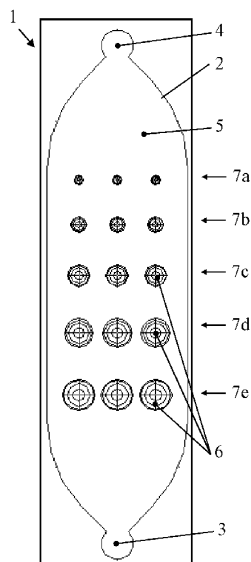


Fig. 1

(57) Abstract: The present invention relates to a microfluidic device (1; 8) for the production of cellular spheroids comprising at least one chamber (2; 9) comprising a fluid inlet (3) for introducing fluid into the chamber (2; 9) and a fluid outlet (4) for removing said fluid from the chamber (2; 9), wherein said at least one chamber (2; 9) comprises a base formed by a substrate (5; 10) comprising at least two recesses (6; 11) to collect a fluid comprising biological cells when the substrate (5; 10) is contacted with the fluid, wherein the size of the at least two recesses (6; 11) decreases from the fluid inlet (3) to the fluid outlet (4) of the at least one chamber (2; 9).